

**ABSTRACT**

A multi-sector in-building repeater, including: a master transmitting unit for receiving multi-sector signals of a carrier from a base station, mixing the multi-sector signals with different transmission intermediate frequency signals, and outputting mixed multi-sector signals to a same transmission line; a plurality of slave transmitting units for extracting sector signals assigned to the multi-sector signals from the master transmitting unit, converting extracted sector signals into high frequency signals, and transmitting converted high frequency signals through an antenna to a mobile terminal.